FIGURE 1

A

Indirubin (5h)

B

$$X \xrightarrow{6'} \mathbb{N}$$

Exemplary Compound	No.	X	Y	R_1	\mathbb{R}_2
Indirubin	5h	H	Н	0	Н
6-Bromoindirubin	5a	Н	Br	0	H
6'-Bromoindirubin	12h	Br	H	0	H
6,6'-Dibromoindirubin	12b	Br	Br	0	H
1-Methylindirubin-3'-oxime ("MeIO")	13d	H	Н	NOH	CH ₃
1-Methyl-6-bromoindirubin	12c	H	Br	0	CH ₃
1-Methyl-6-bromoindirubin-3'-oxime ("MeBIO")	13c	H	Br	NOH	CH ₃
Indirubin-3'-oxime ("IO")	7h	H	Н	NOH	H
6-Bromoindirubin-3'-oxime ("BIO")	_7a	H	Br	NOH	H
6'-Bromoindirubin-3'-oxime	13a	Br	H	NOH	H
6,6'-Dibromoindirubin-3'-oxime	13b	Br	Br	NOH	Н
6-Bromoindirubin-3'-methoxime	9a	H	Br	NOCH ₃	Н
6-Bromoindirubin-3'-acetoxime	8a	H	Br	NOCOCH ₃	H
1-Methylindirubin	12d	H	H	0	CH ₃

FIGURE 2A

Reagents: (a) chloral hydrate, H₃NOH.H.Cl, H^{*}: (b) H₂SO₄; (c) NaNO₃, H₃SO₄, 0 °C; (d) [CH₃(CH₂)₁].SoCH=CH₂ [(C₂H₃)²].Jed, dioxane, 100°C (e) 3-acetoxyindole, Na₂CO₃MeOH 25°C; (f) H₂NOH.H.Cl, Py, 120 °C (g) Ac₂O, Py, 0 °C; (h) H₂NOCH₃.H.Cl, Py, 120 °C

FIGURE 2B

Reagents: (a) (CH₃)₂SO₄, DMF; (b) Na₂CO₃/MeOH, 25°C; (c) H₂NOH.HCl, Py, 120 °C; (d) Ac₂O, Py, 0 °C

FIGURE 3A

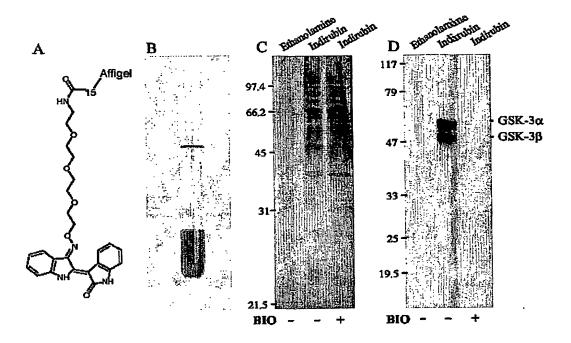
Reagents: (a) NaNO₃, H₂SO₄, 0 °C;

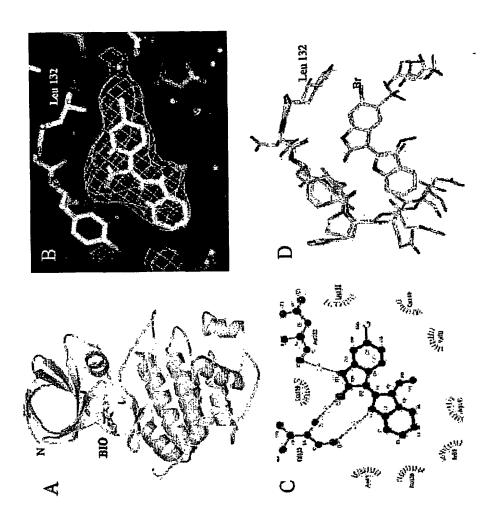
- (b) 2,2-dimethylpropane-1,3-diol, p-TSA, cyclohexane;
- (c) Pd/C (10%), H₂, MeOH;
- (d) Ac₂O, Py, 0 °C;
- (e) aq. oxalic acid, 60 °C;
- (f) H₂SO₄, 30%, 100 °C/borax;
- (g) 3-acetoxyindole, Na₂CO₃/MeOH 25 °C;
- (h) H₂NOH.HCl, Py, 120°C;

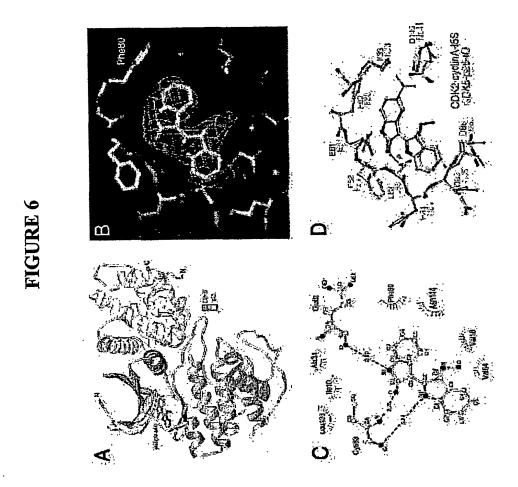
FIGURE 3B

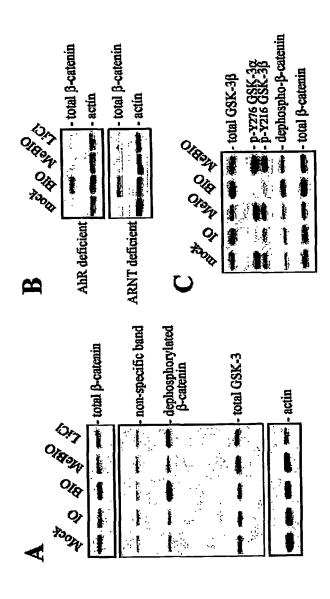
Reagents: (a) Br₂, EtOH, 0 °C; (b) Ac₂O, Py, 0 °C; (c) aq. oxalic acid, 60 °C; (d) H₂SO₄, 30%, 100 °C/borax;

- (e) 3-acetoxyindole, Na₂CO₃/MeOH 25 °C; (f) H₂NOH.HCl, Py, 120°C.









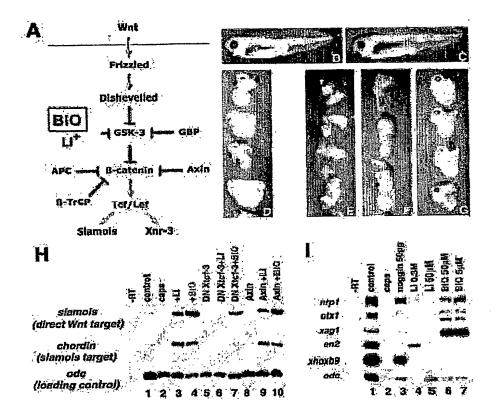


FIGURE 9A

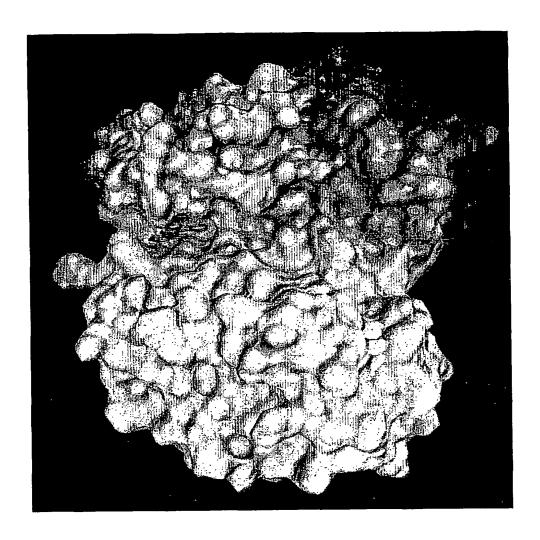


FIGURE 9B

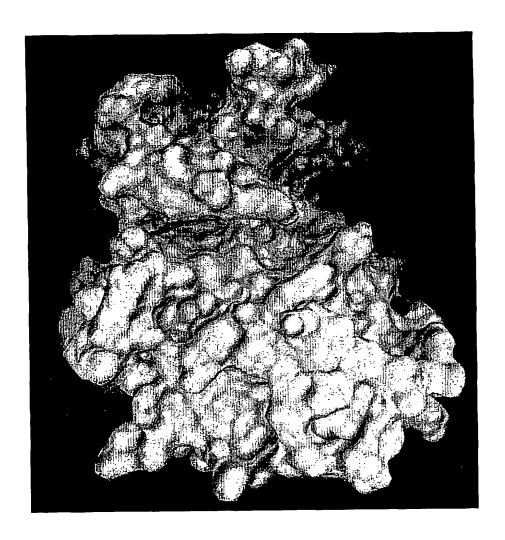


FIGURE 9C

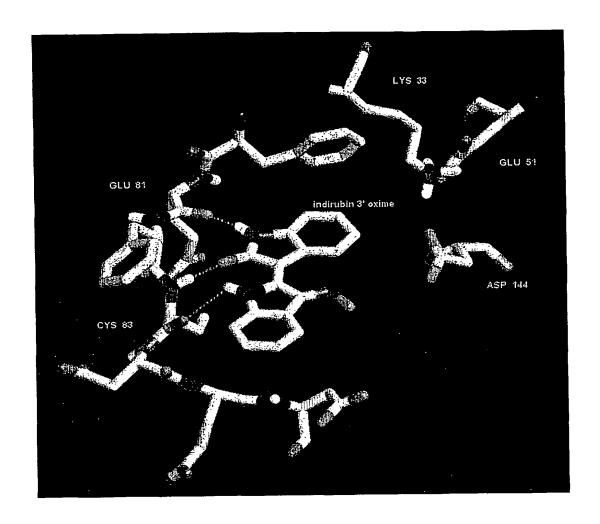
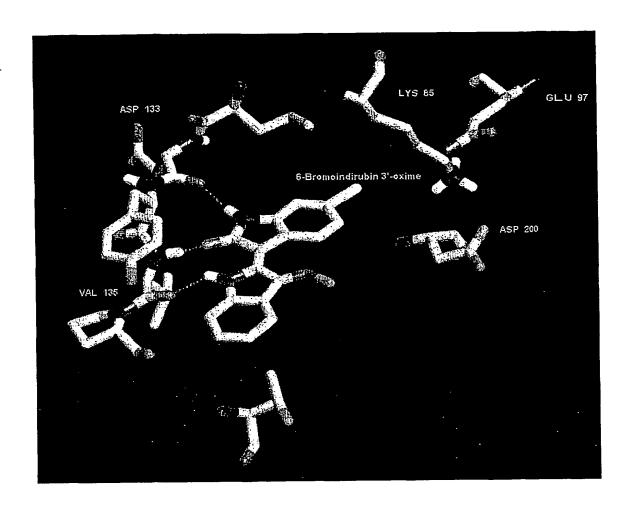


FIGURE 9D



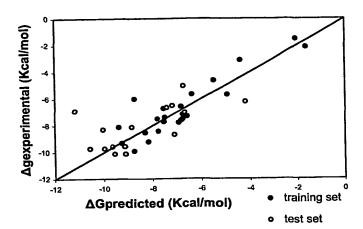
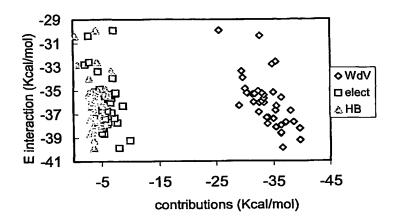


FIGURE 11

A



В

